

May 13, 1960

Dear Dr. Herold:

Thank you <sup>your</sup> ~~for~~/note, and calling my attention to the Lockheed paper on mixed beams.

May I point out one feature their proposal did not quite reach, that the ions of opposite charge could be clustered and accelerated by an RF potential field, giving a somewhat ~~sk~~ ordered plasma (in fact an extended crystal). At some frequencies, this might facilitate the detachment of the ions, and perhaps also the efficiency of conversion into beam power.

A recent issue of the PIRE on space electronics also gives some further analysis of the needs for, and methods of, beam neutralization not including the present suggestion.

Let me see the blast-off.

Sincerely,

Joshua Lederberg